DEPARTMENT OF THE NAVY
NAVAL HOSPITAL
BOX 788250
MARINE CORPS AIR GROUND COMBAT CENTER
TWENTYNINE PALMS, CALIFORNIA 92278-8250

IN REPLY REFER TO:
NAVHOSP29PALMSINST 6530.1C
Code 0502
9 October 1997

NAVAL HOSPITAL TWENTYNINE PALMS INSTRUCTION 6530.1C

From: Commanding Officer

Subj: BLOOD AND BLOOD PRODUCT PROCEDURES

Ref: (a) OPNAVINST 6530.4
(b) NAVMED P-5l0l (Technical Manual of the American Association of Blood Banks), current edition
(c) NAVMED P-5120 (Standards for Blood Banks and Transfusion Services), AABB, current edition
(d) Title 2l, Code of Federal Regulations, current edition
(e) Circular of Information For the Use of Human Blood and Blood Components, April 1997

Encl: (l) Blood Bank Services and Procedures
(2) Blood Bank Products and Services Available

l. Purpose. To establish policies to govern the professional services of the Blood Bank and procedures in obtaining and administering blood and blood derivatives as directed by references (a) through (e).

2. Cancellation. NAVHOSP29PALMSINST 6530.lB.

3. Background

a. This command has a Memorandum of Understanding with the Community Blood Bank Center, Rancho Mirage, using a service exchange agreement for donor units between the Marine Corps Air Ground Combat Center (MCAGCC), Twentynine Palms, and the Community Blood Bank Center (CBBC).

b. This command does not maintain a blood donor center. All products are supplied by either CBBC or other military commands.

c. Blood or blood products are to be stored only within the Blood Bank as directed in references (a) through (e). Storage elsewhere is strictly prohibited.

d. Blood products are issued from the Blood Bank one unit for one patient at a time except in critical emergencies. If blood has not been used, it is to be returned within fifteen minutes of issue. Blood Bank procedures are referred to in enclosure (l).

e. Blood products and services available are listed in enclosure (2).

4. Action

a. Commanding Officer shall appoint in writing:

(l) A Pathologist or an Internal Medicine Physician as Blood Bank Medical Officer.

(2) A laboratory medical service corps officer as Blood Bank Officer.

b. Blood Bank Medical Officer shall:

(l) Be knowledgeable in blood bank operations and hemotherapy, including the standards, regulations and recommendations in references (a) through (e).

(2) Provide guidance on the principles of hemotherapy and blood banking.

(3) Discuss findings at Morbidity and Mortality Committee meetings with medical staff. Minutes of these meetings are sent to the Performance Improvement department.

c. Blood Bank Officer shall:

(l) Be responsible to the Commanding Officer for the proper operation of the Blood Bank.

(2) Maintain liaison with the MCAGCC Assistant Blood Donor Program Officer; Chief, Laboratory Service, Naval Medical Center, San Diego (NMCSD); and Western Area Blood Program Coordinator, NMCSD.

(3) Strictly enforce the regulations and standards prescribed by references (a) through (d) for processing, storing and transporting blood.

(4) Provide information to health care providers and clinical staff on regulations and standards related to transfusing blood and blood products.

d. Healthcare providers shall ensure informed consent is obtained from the patient prior to administration of any blood product or component. In situations involving a patient who is not of legal age, mentally competent, or capable of understanding the implications and hazards associated with blood product administration, informed consent must be obtained from the patient's parent or guardian.

e. All personnel who request blood, administer blood and blood products, or are involved in the operation of the blood bank shall be familiar with and adhere to the procedures in enclosure (2) and in the Naval Hospital Professional Self Instruction Course on Administering Blood and Blood Products.

f. Department Heads of areas that request blood, administer blood and blood products, or are involved in the operation of the Blood Bank shall ensure a copy of reference (e) is maintained in the area where blood is administered.

5. New or Revised Forms

a. Release of Blood for Emergency Transfusion (NAVHOSP29PALMS Form 6530/09), Patient Crossmatch Record (NAVHOSP29PALMS Form 6530/ll), Transfusion Reaction Report (NAVHOSP29PALMS Form 6530/l2), and Naval Hospital Laboratory Request (NAVHOSP29PALMS Form 6470/02) are being adopted in accordance with this instruction and may be obtained through Central Files.

b. Blood or Blood Component Transfusion Form (SF-518), may be obtained through Central Files.

R. S. KAYLER

Distribution:
List A

BLOOD BANK SERVICES AND PROCEDURES

1. Requesting Blood

a. Request for Transfusion Service

(l) For each unit of blood product requested, one completed Blood or Blood Component Transfusion Form (SF-5l8) and Laboratory Requisition (NAVHOSP29PALMS Form 6740/02), Appendix A, shall be submitted (this includes Rh Immune Globulin requests). The date and hour required, and the diagnosis must be on the SF-518. The requesting health care provider's name (signature not required) must appear in the box marked "physician". The individual drawing the blood specimen and the verifier (usually the patient) must both sign the SF-518 in the lower right hand corner of Section 1. If the patient is unable to verify and sign, or is a minor, then a staff member such as a laboratory technician, registered nurse, or the requesting health care provider must verify and sign.

(2) One seven milliliter red top tube is required for every two units of blood requested. Only one seven milliliter red top tube is required for any number of Fresh Frozen Plasma (FFP), platelet or cryroprecipitated antihemophilic factor (AHF) units.

(3) Deliver requisitions and specimen(s) directly to a Blood Bank Technician.

(4) The Typenex armband is used to identify the patient, specimen(s), and unit. Print the patient's full name, social security number (SSN), nursing unit, date and time obtained, and the initials of the person obtaining the specimen on the armband. Place the armband around the patient's wrist, remove the tube identification label and place it on the specimen tube. Attach the strip of corresponding Typenex numbers to the SF-5l8 with a paper clip.

(5) The Blood Bank will not accept unlabeled specimens.

b. Routine Requests. Routine requests must be submitted to the Blood Bank by 1400 on the day prior to transfusion. If received after 1400, they will be processed the following day.

Routine blood requests are processed within the framework of the Blood Bank's daily work schedule. If blood is needed for use at a specific time, indicate this on the SF-5l8.

c. Preoperative Blood. Submit preoperative blood requests for scheduled surgery to the Blood Bank by 1000 on the day prior to surgery.

d. Autologous Blood Transfusions. The use of autologous blood is encouraged whenever patient condition and time allow. Autologous blood transfusions can be arranged with the Blood Bank Officer by submitting a Consultation Request (SF-5l3) at least two weeks in advance.

e. Type and Screen Requests (T&S)

(l) "Type and Screen" requests are processed as follows:

(a) The patient's ABO group, Rh type, and antibody screen are performed.

(b) If abnormalities in the antibody screen occur or no compatible blood is available, the laboratory staff will immediately notify the requesting healthcare provider.

(c) SF-5l8s are held in the Blood Bank in the event a transfusion is needed.

(2) Ordering "Type and Hold" is not advisable, as antibody screens are not performed prior to transfusion requests. In the event of an emergency situation, this additional screening would delay transfusion.

(3) If actual administration of a blood product is anticipated, order "Type and Crossmatch" so the products will be ready when needed.

(4) All T&S requests will automatically be converted to crossmatches by the laboratory personnel within four hours if the patient has a positive antibody screen.

f. Unusual requests. All available blood products and the appropriate request forms are listed in enclosure (2).

g. Emergency Requests

(l) If a health care provider orders an emergency type and crossmatch, mark the SF-5l8 "Emergency" in the portion of Section 1 normally used to indicate date and hour wanted.

(2) If an extreme degree of urgency exists, group and type specific blood can be issued before the crossmatch is performed, provided a blood sample is submitted. Type specific blood WILL NOT be given without a sample being tested. If no sample is submitted, two units of group "O negative" will be issued.

(3) If the patient is a male who is bleeding profusely and no sample is tested for a match, group "O positive" will be issued. This type is more readily available in larger quantities and there is no risk of passing on acquired anti-D, should the patient be Rh negative.

(4) If blood is issued without a blood sample being processed for compatibility, a Release of Blood for Emergency Transfusion Form (NAVHOSP29PALMS Form 6530/9), Appendix B, must be signed by the medical officer prior to release of the blood by the Blood Bank.

2. Crossmatch

a. After the ABO and Rh type of the patient are determined, the units of blood are selected for crossmatching. The types of the units will be confirmed when the red cells are received from available blood supplies.

b. The technician performs the crossmatch, logs all results on the Patient Crossmatch Record (NAVHOSP29PALMS Form 6350/11), checks the SF-5l8's, the unit numbers and the unit. The technician then signs the SF-5l8 to verify all has been completed and notifies the requesting health care provider that the blood is available. All information will be annotated on the flat issue log located in the Blood Bank.

c. If the patient's specific group and type is not available, Blood Bank personnel will select the most compatible second choice. When compatibility problems are encountered, the

Blood Bank may be required to modify the time frame and the mode of administration of the selected units of blood. The requestor will be notified of the delay in delivery.

d. Crossmatches expire 48 hours after the blood specimens submitted for testing were obtained. This may be extended to 72 hours by the Blood Bank Officer. All Crossmatches and T&S expire 24 hours following the administration of any blood product.

3. Removing Blood Units from the Blood Bank

a. Blood is not to be removed from the Blood Bank until the physician is ready to administer it. One unit of blood is issued at a time, as needed for transfusion, unless the patient is bleeding profusely and more than one line is available for blood product administration.

b. Prior to issue, the technician will visually inspect the unit for acceptability, verify that the patient's blood type matches or is compatible with the selected product, the unit numbers correspond, and all testing is complete.

c. The technician will sign the SF-5l8 in Section III under "Pre Transfusion Date", sign off the flat log in the Blood Bank, and have the individual to whom the product is being issued sign the log.

d. When blood products are being picked up from the Blood Bank, the patient's addressograph plate, the patient's ID Card, or some other form of positive identification containing the patient's full name, SSN, and date of birth must be provided.

4. Administering Blood and its Derivatives

a. A health care provider must order the units to be infused in writing. Registered nurses may not assume this responsibility.

b. A transfusion may be started by a health care provider or by a registered nurse who has current intravenous therapy certification. Prior to administration, two individuals must perform the following verification procedures:

(l) Match the patient's name and transfusion number on the armband with the name and transfusion number on the SF-5l8 and the transfusion number on the unit.

(2) Both individuals will sign the SF-5l8, Section III, verifying number identification of the transfusion recipient and donor unit.

c. Except in an emergency, the health care provider must document that the indications, risks, complications and alternatives have been discussed with the patient and "Informed Consent" has been obtained.

d. The post-transfusion data portion of Section III of the SF-5l8 shall be completed by the health care provider or registered nurse who terminates the transfusion.

e. Registered nurses are professionally accountable for their actions; therefore, registered nurses, have the professional duty to refuse to administer blood and its derivatives if they believe it is contraindicated.

f. Absolutely no other fluids, additives or medications, other than normal saline, will be infused through the blood administration system while blood is being infused.

5. Returning Blood Units to the Blood Bank

a. If the transfusion is delayed more than 15 minutes, return blood immediately to the Blood Bank. NEVER PLACE BLOOD IN NURSING UNIT REFRIGERATOR.

b. Blood returned to the Blood Bank more than 30 minutes after it has been checked out will be destroyed.

c. Following the administering of a unit, return the bag and transfusion set, with 5 cubic centimeters of blood remaining in it, promptly to the Blood Bank with the carbon copy of the SF-518 completed by a health care provider or registered nurse.

6. Transfusion Reaction. First, immediately stop the infusion. Any transfusion reaction confirmed by a health care provider must be reported by telephone to the Blood Bank. The SF-5l8 is

completed, and action taken, as outlined on the SF-5l8. A completed Transfusion Reaction Report (NAVHOSP29PALMS Form 6530/12) accompanied by post-transfusion reaction specimens, will be submitted to the Blood Bank immediately following any transfusion reaction. Further descriptions of transfusion reaction can be found in the Naval Hospital Professional Self Instruction Course on Administering Blood and Blood Products.

7. Expired Blood. Expired blood shall not be used.

8. Release of Blood. In general, crossmatched units are held 48 hours. After 48 hours, units will be released unless otherwise ordered by the attending medical officer. The Blood Bank will be notified immediately when a crossmatch request is cancelled.

9. Rh Immune Globulin (Rh IG or RhoGam) is used to prevent formation of antibodies in an Rh (D) negative female, who delivered an Rh (D) positive infant or who had an abortion or miscarriage.

a. Rh Immune Globulin will be requested on a SF-5l8, which will be submitted to the Blood Bank. Rh Immune Globulin is administered by a registered nurse.

b. The SF-5l8 is to be filled out in the same manner as for blood transfusion, except that the Post Transfusion Data portion of Section III remains blank, and a physician's supervision of the first injection is not required.

c. Inject the contents of one vial into the postpartum patient intramuscularly. Do not inject into the infant. Rh Immune Globulin is administered within 72 hours after delivery, abortion, or miscarriage.

d. There is the potential for antibodies to develop ante-natally. This risk is substantially reduced by administering Rh Immune Globulin to Rh (D) negative mothers at 28 weeks gestation. This procedure requires a SF-5l8, filled out exactly as for other Rhogam requests. It is submitted as other Blood Bank specimens and is considered to be a routine request. Generally, the RhIG will be ready for administration the day following submission.

BLOOD BANK PRODUCTS AND SERVICES AVAILABLE

PRODUCTS AVAILABLE	FORM AND SPECIMEN REQUIRED
Packed Red Blood Cells (PRBC) - CPDA-l preserved, 250 cc - ADSOL (AS-1 and AS-3), 325 cc	SF-5l8 for each unit; one 7ml red top tube for each two units
Fresh Frozen Plasma (FFP)	SF-518 for each unit
Cryoprecipitated Antihemophilic Factor (CRYO).	SF-518 for each unit
Platelet (PLT) concentrate or PLT Pheresis can be specially ordered from CBBC with concurrent delays associated with transportation. ordered if 5-8 units of PLT each pooled PLT or Pheresis	If 1-4 units of PLT concentrate is requested, the Blood Bank will order equivalent pooled PLT. One PLT Pheresis will be concentrate is requested. One SF-518 is required for
Rh Immune Globulin (Rh IG/RhoGam)	SF-518 for each dose and one 7ml red top tube. Same forms and specimen required for antenatal RhIg.

SERVICES AVAILABLE	FORM AND SPECIMEN REQUIRED
Group and Type	Naval Hospital Laboratory Request (NAVHOSP29PALMS Form 6740/02); one red top tube.
Type and Hold (not recommended) - Patient will be grouped and typed; for low probability of transfusion	Blood or Blood Component Transfusion Form (SF 5l8); One red top tube.
Type and Screen - Patient will be grouped, typed, and screened for antibodies; blood will be made available, but not crossmatched.	SF-5l8; one red top tube.

SERVICES AVAILABLE	FORM AND SPECIMEN REQUIRED
Type and Crossmatch - Patient will be grouped, typed, screened for antibodies, and crossmatched; for high probability of transfusion	SF-5l8; red top tube NAVHOSP29PALMS Form 6530/11
Direct Coombs top tube	NAVHOSP29PALMS Form 6740/02; red or lavender
Indirect Coombs	NAVHOSP29PALMS Form 6740/02; red top tube
Antibody Identification	NAVHOSP29PALMS Form 6740/02; red top tube and lavender top tube.

Appendix A NH29Palms Form 6740/02

Appendix B Release of blood for emergency transfusion

Appendix C NH29Palms Form 6350/11

Appendix D NAVHOSP29PALMS Form 6530/12

A Requires Appointment be made with Lab
C Requires both Consult and Appointment
∂ 0800 thru 1400 ONLY Mon-Fri
∂∂ 0800 thru 1330 ONLY Mon-Fri
§ Medical Use ONLY – NO Legal Specimens (See Lab Guide)

Patient Information (Name, FMP-SSN, Sex, Age, (DOB), Phone Number, and Requesting & Health Record Location are REQUIRED.

Health Record Location:

Requesting Provider	Requesting Location	Date & Time

HEMATOLOGY	R	S
CBC		
Differential (HCP initial required)		
Platelet Count		
Retic Count		
Sed Rate		
MonoSpot		
Sickle Cell Screen		
COAGULATION		
PT		
PTT (APTT)		
Fibrinogen		
Bleeding Time	A	
URINALYSIS		
Routine U.A.		
Routine & Micro U.A.		
Beta H.C.G. (Qual)		
Semen Analysis	C	
C.S.F.	Tube #	
Cell Count & Diff		
CSF Glucose		
CSF Protein		
Meningitis Screen		
MISC. BODY FLUIDS	Tube #	
BF Cell Count & Diff		
BF Glucose		
BF Protein		
Crystal Exam.		
IMMUNOHEMATOLOGY		
ABO / Rh		
Direct Coombs (DCT)		
Indir. Coombs (Abs)		
BBS (ABO/Rh,DCT,Abs)		
Cord Blood Study		

CHEMISTRY (Serum/Plasma)	R	S
Elecrolytes (Na, K, Cl, co2)		
Glucose (Random)		
Glucose (Fasting)		
1° Post Glucose (∂)		
Glucose 2° PP (∂∂)		
Glucose Tolerance	A	
B. U. N.		
Creatinine		
Uric Acid		
Magnesium		
Inorg. Phosph.		
Calcium		
Total Protein		
Albumin		
Total Bilirubin		
Direct Bilirubin		
Neonatal Bilirubin		
Gamma GT		
Alk. Phosphatase		
ALT (SGPT)		
AST (SGOT)		
LD		
CK		
CK(MB)		
AmyLase		
Cholesterol		
Triglyceride		
HDL		
P1 E, Glu, BUN, Cr		
P2 P1, Ca, P, Mg, Alb		
Cardiac (Ast, LD, CK)		
Lipids (Chol, TG, HDL)		
LFT (Total & Dir. Bili AST, ALT, GGT, LD, Total Protein)		
Thyroid (T4, T3U, FTI)		
PNS-NOB (CBC, Plt, UA, (Rubella, HbSAg, RPR Chylamida, BBS)		
PNS-28 CBC, Plt, Abs		

URINE CHEMISTRY	R	S
AmyLase (Random)		
AmyLase (2°) Vol:_____		
Electrolytes (Na,K,Cl)		
24 Hr. Collections: Total Volume: mL.		
•---------- Calcium		24°
•---------- Total Protein		24°
•---------- Phosphorous		24°
•---------- Urea (UUN)		24°
•---------- Uric Acid		24°
•---------- Creatinine		24°
Creatinine Clear.		
CrC Vol: _____		
T.D.M. & TOXICOLOGY		
Gentamycin PEAK _____		
TROUGH		
Carbamazepine		
Dilantin		
Phenobarbitol		
Lithium		
Theophylline		
Digoxin		
Acetaminophen		
Salicylate		
ETOH (§)		
Fe Poisoning Screen (Fe, T.I.B.C.)		
Urine Drug Screen (§) (Opiate, Cocaine, Barbiturate, THC, Benzodiazepine, & Amphetamine)		

SEROLOGY/MISCELLENOUS	R	S
R.P.R.		
ASO		
Rheumatoid Factor		
AmnioStat		
TSH		
Beta HCG (Quant.)		
Rubella		
Chlymadia		
HbSAg		
REFERENCE LAB TESTING		
Anti-Nuclear Ab Scrn		
Hemoglobin A1c		
AFP		
CEA		
PSA		
T3 RI		
Toxoplasmosis Abs		
HSV I & II		
Hepatitis (Anti-A IgM, HbCAb, HbSAb, HbSAg)		
Iron W/U (Ferritin, Fe, & TIBC)		
Fertility Panel (LH, FSH, Prolactin)		
Sickle Cell Screen		
G6PD		
HIV (§		
OTHER TESTING		

NOTE: All blood product ordering (X-MATCH, T&S, RhoGam,Cryo, FFP) requires a SF-518 for EACH unit of product!!

1-WHITE LAB/UA 2-BLUE HEMO 3-GOLDRD CHEM
4-YELLOW SPECIALS 5-GREEN BLOOD BANK 6-PINK CLINIC WARD

NH29P 6740/02 (6-93)
*U.S.GPO:1994-581-003/94126

Appendix A
to Enclosure (2)

RELEASE OF BLOOD FOR EMERGENCY TRANSFUSION

1. Due to the critical condition of _____
_____,

I request the immediate release of packed red blood cells for emergency transfusion, without a completed crossmatch. I assume complete responsibility for any resultant reaction or injury to my patient.

UNIT NUMBER	UNIT TYPE AND RH

_____ _____
DATE PHYSICIAN'S SIGNATURE

NAVHOSP29PALMS Form 6530/09
(Rev. 4/94)

NAME (LAST, FIRST, MI)	SSN	DOB

ANTIBODY INFORMATION / OTHER DATA

WARD	PATIENT BLOOD TYPE										PATIENT ANTIBODY SCREEN						
	DATE	ANTI A	ANTI B	ANTI D	D CON	DU	DU CONT	A1 CELL	B CELL	INTER PRETATION		15	37 ºC	AHG	CC	INTER PRETATION	TECH
	# 1										SI						
											SII						
											AUTO						
	# 2										SI						
											SII						
											AUTO						
	# 3										SI						
											SII						
											AUTO						
	# 4										SI						
											SII						
											AUTO						
	# 5										SI						
											SII						
											AUTO						

COMPATIBILITY TESTING CARD

NH29PALMS FORM 6350/11

PATIENT CROSSMATCH RECORD

						FFP								
DATE	PRO #	UNIT NUMBER	PRODUCT	SEGMENT NUMBER	UNIT ABO/Rh	AC	BC	IS	37ºC	AHG	CC	INTERPRETATION	DISPOSITION

NAME (LAST,FIRST, MI)

DISPOSITION CODE
URD = UNIT RELEASE
TNR = TRANSFUSED. NO REACTION
RTT = REACTION TO TRANFUSION

TRANSFUSION REACTION REPORT

TIME IS OF THE ESSENCE - SUBMIT IMMEDIATELY!

1. Stop transfusion. Keep IV open with saline.

2. Summon any available physician immediately.

3. Check all identifying data.

4. Notify Blood Bank of possible transfusion reaction.

5. Obtain the following specimens for Laboratory Department evaluation.

    a. Urine - immediate post transfusion and a specimen collected four hours following the reaction.

    b. Blood (completely fill all tubes, signed by phlebotomist)

        (1) red top tube

        (2) lavender top tube

        (3) blue top tube

6.	Before Transfusion	During Transfusion	Post Transfusion
Temperature			
Blood pressure			
Pulse rate			

Clinic diagnosis _____

Previous transfusion ___Yes ___No Date_____

Amount received prior to reaction_____

Time started_____Time stopped_____

Category: Whole blood____packed cells_____Other_____

Was the blood warmed?_____ If yes, how?_____

NAVHOSP29PALMS Form 6530/12 (Rev. 4/94)
(replaces NAVHOSP29PALMS Form 6530/1)